

Appendix C – Claim Severity Model

Introduction

For purposes of our analysis, we define the claim severity, or “loss rate,” as the ratio of the profit/(loss) on a property to the amount of principal unpaid on the loan. The profit/(loss) on a claim is defined as the acquisition cost plus holding costs plus selling expense less selling price. (Note that the amount of profit/(loss) can only be determined after the property has been disposed of.) The acquisition cost has three components: the unpaid loan balance, interest lost by the lender as a result of default, and legal/administrative costs associated with foreclosure. Holding costs are the net costs to FHA for repairing, maintaining, paying taxes, and collecting rents (if possible) on the property while it is held in inventory.

We understand that FHA frequently looks at loss as a ratio to acquisition cost (a component of the loss) but, for modeling purposes, it is more useful to use unpaid balance as the basis. We show the severity indications on both bases for clarification. We also show acquisition cost as a ratio to unpaid balance. The indications and selections are summarized in Exhibits C.1 through C.3.

Data Provided

Our estimate of loss rate for future claims is based on an examination of actual losses, by quarter, since 1995 (that is, the last 31 calendar quarters). The actual rate is shown by quarter and by loan type in Exhibit C.2. For informational purposes, we also show acquisition cost relative to unpaid balance and loss relative to acquisition cost.

Selected Rate of Loss

We selected a loss rate by loan type for future claims, based on the actual loan type loss rates observed in 2000 and subsequent. We believe this reflects, but does not overreact to, the observed downward trend in loss rates.

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
ACQUISITION COST TO HUD AS A RATIO TO UNPAID LOAN BALANCE

BY LOAN TYPE

CALENDAR							
YEAR	QUARTER	ARM	F15	F30	SARM	SF15	SF30
1995	1	115%	125%	118%	112%	120%	113%
	2	116%	122%	118%	110%	121%	113%
	3	115%	126%	119%	111%	115%	112%
	4	115%	127%	118%	111%	115%	112%
1996	1	114%	128%	118%	111%	120%	113%
	2	115%	127%	119%	112%	119%	113%
	3	115%	128%	120%	112%	119%	113%
	4	115%	130%	118%	111%	118%	113%
1997	1	115%	126%	118%	112%	122%	113%
	2	114%	129%	118%	113%	121%	113%
	3	115%	128%	118%	113%	122%	113%
	4	115%	125%	118%	113%	122%	113%
1998	1	116%	127%	119%	113%	121%	114%
	2	116%	125%	118%	113%	124%	114%
	3	116%	124%	118%	114%	126%	114%
	4	116%	126%	118%	114%	129%	114%
1999	1	116%	130%	118%	115%	125%	114%
	2	116%	130%	119%	115%	131%	114%
	3	115%	123%	117%	113%	126%	113%
	4	116%	127%	118%	115%	131%	114%
2000	1	118%	129%	119%	116%	131%	115%
	2	119%	132%	119%	116%	133%	115%
	3	119%	132%	119%	118%	133%	116%
	4	120%	137%	120%	117%	135%	115%
2001	1	120%	134%	120%	118%	136%	116%
	2	120%	134%	119%	118%	139%	116%
	3	120%	127%	119%	120%	133%	116%
	4	121%	137%	119%	118%	136%	117%
2002	1	120%	130%	118%	118%	143%	118%
	2	121%	132%	118%	118%	136%	117%
	3	120%	129%	117%	118%	138%	116%
	4	120%	127%	117%	117%	143%	115%
2003	1	121%	128%	117%	118%	144%	116%
	2	121%	125%	117%	116%	137%	115%
AVERAGE - 2001-2002:		120%	131%	118%	118%	138%	117%
AVERAGE - ALL YEARS:		117%	128%	118%	115%	128%	114%
AVERAGE - 4 QUARTERS:		120%	127%	117%	117%	140%	116%
AVERAGE - 8 QUARTERS:		120%	129%	117%	118%	139%	116%
SELECTED:		120%	130%	118%	117%	138%	116%
FY 2002		119%	132%	119%	117%	135%	116%
FY 2001		119%	133%	119%	117%	135%	115%

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
MMIF PROFIT/(LOSS) AS A RATIO TO LOAN UNPAID BALANCE

BY LOAN TYPE

CALENDAR									ALL
YEAR	QUARTER	ARM	F15	F30	SARM	SF15	SF30	TYPES	
1995	1	-45%	-68%	-48%	-40%	-42%	-41%	-48%	
	2	-44%	-69%	-48%	-46%	-33%	-40%	-48%	
	3	-45%	-68%	-52%	-47%	-40%	-44%	-51%	
	4	-44%	-66%	-48%	-45%	-39%	-41%	-47%	
1996	1	-42%	-64%	-48%	-45%	-40%	-40%	-47%	
	2	-42%	-70%	-48%	-45%	-34%	-42%	-47%	
	3	-43%	-70%	-51%	-44%	-39%	-43%	-49%	
	4	-44%	-69%	-52%	-45%	-38%	-46%	-50%	
1997	1	-42%	-68%	-51%	-46%	-41%	-47%	-50%	
	2	-43%	-68%	-48%	-50%	-41%	-47%	-48%	
	3	-42%	-68%	-49%	-47%	-37%	-45%	-48%	
	4	-43%	-65%	-47%	-49%	-40%	-46%	-46%	
1998	1	-43%	-73%	-49%	-49%	-46%	-46%	-48%	
	2	-42%	-63%	-46%	-45%	-42%	-45%	-45%	
	3	-43%	-68%	-46%	-49%	-50%	-47%	-46%	
	4	-40%	-62%	-44%	-44%	-49%	-46%	-43%	
1999	1	-42%	-66%	-45%	-47%	-47%	-46%	-44%	
	2	-40%	-50%	-44%	-44%	-49%	-43%	-43%	
	3	-34%	-53%	-38%	-37%	-38%	-40%	-37%	
	4	-38%	-53%	-40%	-39%	-48%	-41%	-40%	
2000	1	-41%	-69%	-46%	-41%	-52%	-43%	-45%	
	2	-43%	-61%	-47%	-42%	-48%	-41%	-45%	
	3	-41%	-64%	-45%	-39%	-54%	-38%	-43%	
	4	-38%	-63%	-42%	-33%	-56%	-34%	-41%	
2001	1	-40%	-65%	-43%	-36%	-59%	-35%	-42%	
	2	-37%	-60%	-40%	-31%	-55%	-31%	-39%	
	3	-33%	-46%	-36%	-26%	-45%	-26%	-35%	
	4	-35%	-61%	-37%	-30%	-38%	-30%	-37%	
2002	1	-34%	-49%	-37%	-30%	-59%	-29%	-36%	
	2	-31%	-52%	-35%	-25%	-46%	-28%	-34%	
	3	-29%	-45%	-33%	-23%	-29%	-26%	-32%	
	4	-29%	-44%	-33%	-19%	-55%	-23%	-32%	
2003	1	-31%	-49%	-34%	-26%	-52%	-28%	-34%	
	2	-29%	-41%	-32%	-21%	-38%	-26%	-31%	
AVERAGE - 2001-2002:		-33%	-53%	-37%	-27%	-48%	-28%	-36%	
AVERAGE - ALL YEARS:		-39%	-61%	-44%	-39%	-45%	-39%	-43%	
AVERAGE - 4 QUARTERS:		-30%	-45%	-33%	-22%	-43%	-26%	-32%	
AVERAGE - 8 QUARTERS:		-31%	-48%	-35%	-25%	-45%	-27%	-34%	
SELECTED:		-32%	-51%	-36%	-26%	-47%	-28%	-35%	
FY 2002		-36%	-57%	-40%	-32%	-49%	-33%	-38%	
FY 2001		-39%	-63%	-43%	-35%	-55%	-34%	-42%	

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
MMIF PROFIT/(LOSS) AS A RATIO TO ACQUISITION COST

BY LOAN TYPE

CALENDAR YEAR	QUARTER	ARM	F15	F30	SARM	SF15	SF30	ALL TYPES
1995	1	-39%	-54%	-40%	-36%	-35%	-36%	-40%
	2	-38%	-57%	-41%	-42%	-27%	-36%	-41%
	3	-39%	-54%	-44%	-42%	-34%	-39%	-43%
	4	-38%	-52%	-41%	-40%	-34%	-37%	-40%
1996	1	-37%	-50%	-41%	-41%	-33%	-36%	-40%
	2	-37%	-55%	-41%	-40%	-28%	-38%	-40%
	3	-37%	-55%	-42%	-39%	-33%	-38%	-42%
	4	-39%	-53%	-44%	-41%	-32%	-41%	-43%
1997	1	-37%	-54%	-43%	-41%	-34%	-41%	-42%
	2	-38%	-53%	-41%	-45%	-34%	-41%	-41%
	3	-36%	-54%	-42%	-41%	-30%	-40%	-41%
	4	-37%	-52%	-40%	-43%	-33%	-41%	-40%
1998	1	-38%	-58%	-41%	-43%	-38%	-40%	-40%
	2	-36%	-51%	-39%	-40%	-34%	-40%	-39%
	3	-37%	-55%	-39%	-43%	-40%	-41%	-39%
	4	-34%	-49%	-37%	-39%	-38%	-40%	-37%
1999	1	-36%	-51%	-38%	-41%	-37%	-40%	-38%
	2	-34%	-39%	-37%	-38%	-38%	-37%	-37%
	3	-30%	-43%	-32%	-32%	-30%	-36%	-32%
	4	-32%	-41%	-34%	-34%	-37%	-36%	-34%
2000	1	-35%	-53%	-39%	-36%	-40%	-37%	-38%
	2	-36%	-47%	-39%	-36%	-36%	-35%	-38%
	3	-34%	-48%	-38%	-33%	-40%	-33%	-36%
	4	-32%	-46%	-36%	-28%	-41%	-29%	-34%
2001	1	-33%	-48%	-36%	-30%	-44%	-30%	-35%
	2	-30%	-45%	-33%	-26%	-40%	-27%	-32%
	3	-27%	-36%	-30%	-22%	-34%	-23%	-29%
	4	-29%	-45%	-32%	-25%	-28%	-25%	-31%
2002	1	-28%	-38%	-32%	-25%	-41%	-24%	-31%
	2	-26%	-39%	-30%	-21%	-34%	-24%	-29%
	3	-25%	-35%	-28%	-20%	-21%	-23%	-27%
	4	-24%	-35%	-29%	-16%	-38%	-20%	-28%
2003	1	-26%	-38%	-29%	-22%	-36%	-24%	-29%
	2	-24%	-33%	-27%	-18%	-28%	-23%	-27%
AVERAGE - 2001-2002:		-28%	-40%	-31%	-23%	-35%	-24%	-30%
AVERAGE - ALL YEARS:		-34%	-48%	-37%	-34%	-35%	-34%	-36%
AVERAGE - 4 QUARTERS:		-25%	-35%	-28%	-19%	-31%	-22%	-28%
AVERAGE - 8 QUARTERS:		-26%	-37%	-30%	-21%	-33%	-23%	-29%